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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,427	11/30/2001	Roberto L. Quoiani	FMCE-P073	5491

7590 09/30/2003
Henry C. Query, Jr.
504 S. Pierce Avenue
Wheaton, IL 60187

EXAMINER

PICKARD, ALISON K

ART UNIT	PAPER NUMBER
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3676

DATE MAILED: 09/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/010,427

Applicant(s)

QUOIANI, ROBERTO L.

Examiner

Alison K. Pickard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7-9,14-18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,7-9,14-18,20 and 34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 4, 7-9, 14-18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogen (4,515,213) in view of Boehm (5,456,314).

Rogen discloses a metallic seal component installed in a bore comprising a shape memory alloy (such as NiTi). The component has an initial configuration that forms a clearance fit with the bore and expands from being heated to form a metal-to-metal seal. The component can be heated by a mandrel (such as a cable or springs 33, which are made of the alloy, too). The seal enabling state is effected by heating or cooling, thus is one-way and/or two-way alloy (see col. 12 line 9 through col. 13, line 53). The component is tubular and can be considered to have a U-shaped cross-section (esp. when expanded) (see Figs. 1A/B and 6B). The component comprises a back up spring 33. The component has a sealing ridge L that makes sealing contact. The component is bi-metallic in that it has two metal parts (i.e. spring and sleeve) or it can comprise a corrosion coating (see col. 12, lines 1-8), or the lip L can be a metal coating (see col. 4, lines 20-24). Rogen does not disclose a recessed surface in the bore. Boehm teaches a packing tool having a sleeve 31 forming a metal-to-metal seal in a bore. Boehm teaches recesses in the bore surface to enhance the connection. The recesses 23 grab the sleeve and further prevent it from moving within the bore. Therefore, it would have been obvious for one of

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ordinary skill in the art at the time the invention was made to provide a recessed surface in the bore to enhance the connection and retention of the packing in the bore. Smith '956 and Singeetham '376 also teach a recess for locking a packing within a bore.

Response to Arguments

3. Applicant's arguments with respect to claims 1, 3, 4, 7-9, and 14-18 have been considered but are moot in view of the new ground(s) of rejection.

Rogen discloses a seal component comprising the claimed limitations. Boehm, Smith, and Singeetham teach the use of a recessed surface in a bore to lock a packing seal within the bore. The recess enhances the seal and locking features. Rogen's seal is capable of expanding into a recessed surface to form the metal-to-metal seal with the recessed surface. Ross '497 also discloses a seal and actuator made of a shape memory alloy. Ross can be modified by Rogen's teaching of making both the sleeve and actuator of shape memory alloy so it can be recoverable and reused. Smith teaches a recess, such as 22, that is engaged by seal sleeve 70. Ross can be modified with Smith's teaching.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**


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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison K. Pickard whose telephone number is 703-305-0882. The examiner can normally be reached on M-F (9-6:30), with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703-308-3179. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1113.


Alison K. Pickard
Examiner
Art Unit 3676

AP